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Application No.: 10/565,994

JAN 17 2008

Docket No.: JCLA19238

AMENDMENT

In The Claims:

Please amend the claims as follows:

1. (currently amended) A fixer for a fiber bragg grating sensor S to measure a strain of an object to be measured, the fixer including:

a pair of fixing pieces 3 for securing the fiber bragg grating sensor S to the object, wherein each of the fixing pieces 3 has a sensor holding groove 3b at a bottom surface of the fixing piece, and a tube receiving portion 3a protruded from one side of the fixing piece, which communicates with the sensor holding groove 3b, wherein each fixing piece 3 with the tube receiving portion 3a is an integrate structure in assembly for measuring the strain of the object; and

a tube 2 enclosing the fiber bragg grating sensor S, disposed between the pair of fixing pieces 3, such that both ends of the tube 2 are detachably secured to each of the tube receiving portions 3a of the fixing pieces 3 by a fastening member 4,

wherein the tube 2 is not directly fixed to a surface of the object to be measured; and the fiber bragg grating sensor S is inserted into the tube 2, and both ends of the fiber bragg grating sensor S are firmly secured to the sensor holding groove 3b of the fixing piece 3 by an adhesive F,
and each fixing piece 3 with the tube receiving portion 3a is a single structural body.

2. (original) The fixer as claimed in claim 1, further comprising a cover 6 for closing the sensor holding groove 3b of the fixing piece 3.

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3. (original) The fixer as claimed in claim 1, wherein each of the fixing pieces includes the tube receiving portion protruded from each side of the fixing pieces, a threaded hole is formed on an upper portion of the tube receiving portion for exposing a side surface of the tube, and a fastening bolt is threadedly engaged with the threaded hole for selectively compressing and fastening the tube from the side surface through the thread hole.

4. (original) The fixer as claimed in claim 1, wherein the sensor holding groove 3b is formed with at least one anti-slip groove 3c at an inner side thereof, so that when the adhesive F filled in the sensor holding groove is hardened, it prevents a clearance form being produced in the sensor holding groove 3b due to a coefficient of linear expansion between the fixing piece 3 and the adhesive F.

5. (original) The fixer as claimed in claim 1, further comprising a fixing plate 7 attached to the object to be measured, so that the fixing piece 3 is detachably secured to the fixing plate 7 of the object by a fastening member 5.

6. (original) The fixer as claimed in claim 1, wherein the tube 2 inserted into the tube receiving portion 3a is provided at both ends thereof with a tap 8 to easily prevent a rotation of the tube and maintain a horizontal state thereof.

Claim 7. (cancelled)

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8. (original) The fixer as claimed in claim 1, wherein the pair of fixing pieces 3 is to be fixed on the surface of the object while the tube 2 is not fixed to the surface of the object.

9. (currently amended) A fixer for a fiber bragg grating sensor S to measure a strain of an object to be measured, the fixer including:

a pair of fixing pieces 3 for securing the fiber bragg grating sensor S to the object,
wherein each of the fixing pieces 3 has a sensor holding groove 3b at a bottom surface of the
fixing piece, and a tube receiving portion 3a protruded from one side of the fixing piece, which
communicates with the sensor holding groove 3b, wherein each fixing piece 3 with the tube
receiving portion 3a is an integrate structure in assembly for measuring the strain of the object;
and

a tube 2 enclosing the fiber bragg grating sensor S, disposed between the pair of fixing
pieces 3, such that both ends of the tube 2 are detachably secured to each of the tube receiving
portions 3a of the fixing pieces 3 by a fastening member 4,

wherein the tube 2 is not directly fixed to a surface of the object to be measured; and the
fiber bragg grating sensor S is inserted into the tube 2, and both ends of the fiber bragg grating
sensor S are firmly secured to the sensor holding groove 3b of the fixing piece 3 by an adhesive F,
and [The fixer as claimed in claim 1, wherein] the fastening member fixes the tube 2 but not
change a tension condition of the fiber bragg grating sensor S.

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10. (new) The fixer as claimed in claim 9, further comprising a cover 6 for closing the sensor holding groove 3b of the fixing piece 3.

11. (new) The fixer as claimed in claim 9, wherein each of the fixing pieces includes the tube receiving portion protruded from each side of the fixing pieces, a threaded hole is formed on an upper portion of the tube receiving portion for exposing a side surface of the tube, and a fastening bolt is threadedly engaged with the threaded hole for selectively compressing and fastening the tube from the side surface through the thread hole.

12. (new) The fixer as claimed in claim 9, wherein the sensor holding groove 3b is formed with at least one anti-slip groove 3c at an inner side thereof, so that when the adhesive F filled in the sensor holding groove is hardened, it prevents a clearance form being produced in the sensor holding groove 3b due to a coefficient of linear expansion between the fixing piece 3 and the adhesive F.

13. (new) The fixer as claimed in claim 9, further comprising a fixing plate 7 attached to the object to be measured, so that the fixing piece 3 is detachably secured to the fixing plate 7 of the object by a fastening member 5.

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14. (new) The fixer as claimed in claim 9, wherein the tube 2 inserted into the tube receiving portion 3a is provided at both ends thereof with a tap 8 to easily prevent a rotation of the tube and maintain a horizontal state thereof.

15. (new) The fixer as claimed in claim 9, wherein the pair of fixing pieces 3 is to be fixed on the surface of the object while the tube 2 is not fixed to the surface of the object.